APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,147	03/25/2004	Anson Horton	MS302712.1/MSFTP579US	7392

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EXAMINER
LEE, MARINA

ART UNIT	PAPER NUMBER
2192	

NOTIFICATION DATE	DELIVERY MODE
02/22/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Interview Summary	10/809,147	HORTON ET AL.
	Examiner	Art Unit	
	Marina Lee	2192	

All participants (applicant, applicant's representative, PTO personnel):

(1) _Marina Lee_.   (3)_____.

(2) _Ron Krosky (Reg. No. 58564)_.   (4)_____.

Date of Interview: _____.

Type: a)☒ Telephonic   b)☐ Video Conference
       c)☐ Personal [copy given to: 1)☐ applicant   2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes   e)☐ No.
    If Yes, brief description: _____.

Claim(s) discussed: _1-20 and 241_.

Identification of prior art discussed: _Bates (6,961,924 B2)_.

Agreement with respect to the claims f)☐ was reached. g)☐ was not reached. h)☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: _The proposed amended claims seem to overcome 101 rejection, however, Examiner points out that there is missing gap between (computer-implemented attribtued debugging system and the (debugger & an expression evaluator). Furthermore, the proposed amended claims appear to overcome Bates as currently being applied in the Office action, in the meantime, Examiner is waiting for an Official Response of the proposed claims.._

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

TUAN DAM
SUPERVISORY PATENT EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

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Date: **February 7, 2008**

TO: **Marina Lee – United States Patent and Trademark Office**

FAX NO.:   **571-270-2648**

FROM: **Ron Krosky and Evan Perry**

In re patent application of:

Applicant(s): Anson Horton *et al.*   Examiner: Marina Lee

Serial No: 10/809,147   Art Unit: 2192

Filing Date: March 25, 2004

Title: PROXY OBJECTS FOR DISPLAY

TOTAL NUMBER OF PAGES (INCLUDING THIS PAGE): 8

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Dear Examiner Lee:

As discussed on the telephone, we are requesting an interview for the above captioned application. The following agenda is provided to indicate the proposed topics of discussion.

I.   Discussion of Rejection of Claims 1-20 and 24 under 35 U.S.C. §101
      a.   Discuss effect of proposed amendments
      b.   Discuss concrete, tangible and useful result of the claims
            1.   A display proxy enables a developer to perceive relevant features of the object without being subjected to a complex display including implementation specifics
II.   Discussion of Double Patenting Rejection
III. Discussion of Rejection of Claims 1, 2, 4, 6-9, 11, 12, 18-26 under 35 U.S.C. §102(e)
      a.   Bates *et al.* relates relates to debugging software code wherein the debugger includes additional descriptive material associated with variables beyond the values stored by the variables
      b.   The claims relate to a display proxy employed to generate debug information related to an object (*e.g.* a class variable or the like), wherein the display proxy is examined by the debugger in place of the object
      c.   The cited references disclose examining variables themselves and not a proxy that only provides relevant features while concealing implementation specifics

Attached, please find proposed claim amendments with respect to the above-referenced matter. Thank you for your time and consideration.

Best regards,
-Ron and Evan

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PROPOSED AMENDMENTS

1. (Currently Amended) [[An]] A computer-implemented attributed debugging system comprising:

a debugger that facilitates debugging of a computer software application; and[[,]]

an expression evaluator associated with the debugger that determines details of an object of the computer software application that is a subject of the debugger, the expressions evaluator determines details of the object based upon employs a display proxy associated with [[an]] the object, the display proxy provides relevant features of the object and conceals implementation specifics of the object; and of the computer software application to present debug information associated with the object to a developer.

a variable display component that presents the determined details of the object to a developer.

2. (Currently amended) The system of claim 1, the expression evaluator evaluates an expression associated with the object to determine the details, the expression is implemented in a particular programming language.

3. (Currently amended) The system of claim 2, the programming language comprising at least one of C#, J# and or Visual Basic.Net.

4. (Currently amended) The system of claim 2, further comprising a plurality of expression evaluators, wherein each expression evaluator is associated with a particular different programming language.

5. (Currently amended) The system of claim 1, the object comprising a hash table comprises a class that includes at least one of a property or a method.

6. (Currently amended) The system of claim 1, the expression evaluator creating creates an instance of the display proxy in a debuggee associated with the object of the computer software application.

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7.   (Currently amended) The system of claim 1, the display proxy is implemented as a private nested class within the object.

8.   (Currently amended) The system of claim 7, the display proxy having has access to private implementation details of the object.

9.   (Currently amended) The system of claim 1, further comprising an attribute cache directory that stores an attribute associated with the display proxy, the expression evaluator employing employs the stored attribute to present debug information determine the details of the object.

10.   (Currently amended) The system of claim 1, employed to further comprising an editing component that facilitates modifying of a value associated with the object.

11.   (Currently amended) The system of claim 1, the expression evaluator variable display further employs an attribute at least one attribute associated with the computer software application object to present debug information associated with the computer software application to the developer that provides a format to display the determined details of an object.

12.   (Currently amended) The system of claim 11, the attribute employed to determine specifies at least one of whether a property of the object is displayed or how and whether a type or member the property is displayed.

13.   (Currently amended) The system of claim 12, the attribute employing an enumeration to specify the format of the display.

14.   (Currently amended) The system of claim 13, the enumeration includes one enumeration value associated with an indication that that indicates the type or member property should not be displayed to the developer.

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15.   (Currently amended) The system of claim 13, <u>the enumeration includes</u> one enumeration value ~~associated with an indication~~ that <u>indicates</u> ~~if a type is~~ <u>a</u> hierarchical <u>property</u>[[,]] ~~it should be~~ <u>is</u> expanded by default.

16.   (Currently amended) The system of claim 13, <u>the enumeration includes</u> one enumeration value ~~associated with an indication~~ that <u>indicates</u> ~~a type should not be~~ <u>a</u> <u>hierarchical property is not</u> expanded by default.

17.   (Currently amended) The system of claim 13, <u>the enumeration includes</u> one enumeration value ~~associated with an indication~~ that <u>indicates</u> a ~~target element itself~~ <u>hierarchical property itself</u> ~~should not be shown~~ <u>is not displayed</u>[[,]] ~~but should instead be automatically expanded to have its member(s) displayed~~ <u>and members of the hierarchical property are displayed</u>.

18.   (Currently amended) The system of claim 11, the attribute ~~employed to~~ <u>specifies</u> what is displayed for a class<u>.</u> ~~and/or field.~~

19.   (Currently amended) The system of claim 18, ~~an argument to~~ the attribute <u>includes an argument that</u> ~~comprising~~ <u>comprises</u> a string that is displayed in a value column for an instance of the class<u>.</u> ~~and/or field.~~

20.   (Currently amended) The system of claim 18, the argument <u>is</u> associated with ~~one of a field,~~ a property ~~and a method~~ <u>of the class</u>.

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21.   (Currently amended) A method facilitating attributed debugging comprising:

receiving a request to examine <u>details of one or more properties of</u> an object <u>in a computer software application being debugged</u>;

determining whether a display proxy attribute exists for the object<u>, the display proxy provides relevant properties regarding a state of the object and conceals properties related to implementation of the object</u>;

creating a display proxy for the object <u>in accordance with the display proxy attribute</u>; and[[,]]

examining the display proxy <u>to determine debug information related to the object</u>.

22.   (Currently amended) The method of claim 21 further comprising providing <u>the debug</u> information ~~associated with~~ <u>determined by</u> the display proxy <u>to a developer</u> in response to the request to examine the object.

23.   (Original) A computer readable medium having stored thereon computer executable instructions for carrying out the method of claim 21.

24-25. (Cancelled)

26.   (Currently amended) An attributed debugging system comprising:

means for receiving a request to debug an object in a computer software application;

means for determining whether a display proxy attribute exists in association associated with [[an]] the object, the display proxy provides relevant properties regarding a state of the object and conceals properties related to implementation of the object; exists; and,

means for creating an instance of the display proxy; in a debuggee;

means for examining the display proxy, means for examining the display proxy comprise means for obtaining values of the provided relevant properties; and[[,]]

means for providing debug information associated with the display proxy in response to [[a]] the request to examine debug the object, the debug information is based at least in part on the display proxy and includes at least the obtained values of the provided relevant properties.

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27.   (New) A computer-implemented attributed debugging system, comprising:

a debugger that facilitates debugging a computer software application;

an expression evaluator associated with the debugger that examines at least one object of the computer software application, the expression evaluator determines debug information comprising states of the at least one object, the states include values for at least one property of the at least one object,

the expression evaluator inspects the at least one object to verify if each of the at least one object includes a display proxy that is a private nested class of the object, the display proxy provides relevant properties of an associated object and conceals properties related to implementation of the object, the expression evaluator examines the display proxy to determine debug information that includes values for the at relevant properties of the at least one object;

an attribute cache directory that retains instances of one or more display proxies, the expression evaluator queries the attribute cache directory for instances of display proxies associated with the at least one object, the expression evaluator creates an instance if not retained in the attribute cache directory; and

a variable display component that presents the debug information to a developer, the debug information includes values of relevant properties of the at least one object determined from examination of display proxies of the at least one object.

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